

Claims

1. Multi-part oil control ring (10) for pistons of internal combustion engines, having two lamellae (1, 2) consisting of steel strips and having parallel walls, the working surfaces (h, h') of which have a barrel-shaped asymmetrical shape, in each instance, having a vertex line (3, 3') that extends over the circumference of the lamellae, as well as a spreading spring (4) disposed between the lamellae, which presses the lamellae both axially against one of the walls (5, 6) of a ring groove (7) in the piston, in each instance, and radially against the cylinder wall (8),

characterized in that

the working surfaces (h, h') of the two lamellae (1, 2) are configured in such a manner that they correspond to a final contour approaching a condition of wear in the run-in state of the engine, whereby the vertex lines (3, 3') of the working surfaces (h, h') are oriented in the opposite direction to the center of the ring groove (3), in each instance, in the assembled state of the oil ring (10) in the piston.

2. Multi-part oil control ring according to claim 1, characterized in that the working surfaces (h, h') of the two lamellae (1, 2), in cross-section,
- follows the asymmetrical shape of a polynomial of the second order in a first segment (I), with $h(x) = ax + bx^2$, whereby
 - x = working surface coordinates in the Cartesian coordinate system in mm, and a , b are coefficients, with a being defined by the ratio of the axial wall play of the lamellae relative to the width of the lamellae; b being defined as the amount of the working surface curvature;
 - a supporting vertex (II) $h(x=0)$ configured as an edge, and
 - in a third segment (III) follows the asymmetrical shape of the function $h(x) = cx^2$, with c as a multiple of b .
3. Multi-part oil control ring according to claim 2, characterized in that the vertex lines (3, 3') of the working surfaces (h, h') of the lamellae are oriented in the same direction as the wall (6) of the ring groove (8) that faces away from the piston crown, in each instance.